

## STATEMENT OF CONSIDERATIONS

REQUEST BY SIEMENS SOLAR INDUSTRIES FOR AN ADVANCE WAIVER  
OF U.S. AND FOREIGN RIGHTS UNDER SUBCONTRACT NO. NREL-RAF-5-14142-03  
UNDER DOE PRIME CONTRACT NO. DE-AC36-83CH10093,  
WAIVER NO. W(A)-95-002, CH0850.

The attached petition by Siemens Solar Industries (hereafter Siemens) is for an advance waiver of patent rights under Subcontract No. NREL-RAF-5-14142-03, under DOE Contract No. DE-AC36-83CH10093. Siemens requests that the Department of Energy grant an advance waiver for the domestic and foreign rights to inventions developed in the performance of the above identified subcontract without limitation as to field of use and that these rights will be retained by Siemens subject to the standard Advance Waiver Patent Rights Clause with the enclosed U.S. Competitiveness paragraph as previously agreed to. Additionally, Siemens has accepted the standard background patent and data provisions for licensing of third parties and has agreed that the advance waiver of the Government's rights in inventions developed under the cited subcontract will be subject to the usual march-in rights, U.S. manufacturing preference, and U.S. Government license as set out in 35 U.S.C. 202-204.

The scope of work under the above subcontract involves the development of a reliable high-throughput, high-yield thin film deposition utilizing large-scale processing equipment to make  $\text{CuInSe}_2$  (CIS) a viable option for the next generation of photovoltaics (PV). An additional goal is to develop a 13% efficient, large area champion prototype module and to deliver sets of modules in 1-KW arrays of steadily increasing efficiency culminating with a 1-KW, 12% efficient large area module by the end of the third year of the subcontract.

According to Answer 7, since 1980 Siemens has invested in excess of \$100,000,000 in the development of thin film PV products of which \$50,000,000 was allocated to research in CIS based technology. Outside of the proposed subject subcontract, in Answer 8, Siemens states that they plan to build a factory for the manufacture thin film CIS modules at commercial levels. The subject NREL subcontract should benefit from this effort.

The proposed subcontract would cover a three (3) year performance period, at an estimated cost of \$6,296,000, with Siemens cost sharing at a rate of 50% (\$3,148,000) of the estimated total cost.

According to Answer 5 of the Siemens petition, Siemens, Camarillo, California plant is the world's leading and largest mass production PV facility. Siemens increased its single crystal silicon manufacturing capability by 50% through the construction, in 1990, of its Vancouver, Washington plant. Currently, Siemens is involved in research and development to improve the efficiency of thin film CIS modules, and according to Siemens, these efforts have resulted in the world's highest efficiency for a thin film CIS module.

In Answer 6, Siemens states that it is the world's leading marketer of photovoltaic products with 20% of the world market. However, in Answer 10, Siemens points out that since CIS technology is not new, a fundamental invention would probably not result from the subject research and thus, would not place it in a dominant position with regards to other participants in this field of technology. Siemens stated it would be willing to license patented inventions resulting from this subcontract to other companies to expand the use and development of new products developed under the subcontract.

In Answer 9, Petitioner indicates that it intends to commercialize inventions arising from the subject subcontract on their own provided it is granted the right to patent the subject inventions.

Petitioner states that granting of the advance waiver is a necessary condition to the Petitioner's accepting the contract and providing the matching funds.

In summary, Siemens will cost share at a rate of fifty percent. Granting the waiver will improve Siemens position in commercializing the developed technology and will further encourage Siemens to increase its capital investment in this field. To promote U.S. Competitiveness, Siemens has agreed to the attached U.S. Competitiveness provisions, subject to the approval of the requested waiver.

Upon evaluation of the Waiver Petition and in view of the objectives and considerations set forth in 41 CFR 9-9.109-6, all of which have been considered, it is recommended that the requested waiver be granted.

[REDACTED]  
Bradley W. Smith, Patent Attorney  
Intellectual Property Law Division

Date: 3/2/95

Based on the foregoing Statement of Considerations and the representations in the waiver request, it is determined that the interests of the United States and the general public will best be served by a waiver of the patent rights of the scope described above and therefore the waiver is granted. This waiver shall not apply to any modification or extension of this subcontract where through such modification or extension, the purpose, scope, or cost of the agreement is substantially altered.

CONCURRENCE: [REDACTED]

APPROVAL: [REDACTED]

Robert H. Annan, Director  
Office of Solar Energy Conversion, HQ

Paul A. Gottlieb  
Assistant General Counsel  
for Technology Transfer  
and Intellectual Property

Date: 8/8/95

Date: 8-8-95

(ix) U.S. Competitiveness

In the event that Subcontractor or any assignee transfers title in any subject invention or U.S. patent or U.S. patent application based thereon to, or Subcontractor or any assignee is or becomes, a company or an entity which is majority owned or controlled, directly or indirectly, by a non U.S. company or entity, and the Subcontractor or any assignee has not manufactured in the U.S. a preponderance of the total number of a product embodying a subject invention or produced through the use of a subject invention for use in the U.S., then the Subcontractor or assignee as the case may be, at DOE's request, shall grant non-exclusive sublicenses under such invention, U.S. patent and/or U.S. patent application for the purpose of actively manufacturing any such products in the U.S. for use substantially in the U.S. to U.S. owned or controlled companies identified to Subcontractor or assignee by DOE under fair and reasonable terms and conditions (but without the right to grant further sublicenses or to assign or transfer said sublicenses), with one-half of the consideration of such sublicense inuring to Subcontractor or its assignee and one-half inuring to the Government; and without obligating Subcontractor, any assignee or licensee to grant any licenses, in event that Subcontractor, any assignee or licensee elects to grant licenses to manufacture products for the U.S. domestic market to non-affiliated third parties, under any subject invention or patent or patent application based thereon, Subcontractor, assignee or licensee as the case may be will give preference to U.S. manufacturers who have demonstrated capability of providing high quality photovoltaic products and services.

# ***WAIVER ACTION - ABSTRACT***

***W(A)-95-002 - CH-0850***

## **REQUESTOR**

Siemens Solar  
Industries

## **CONTRACT SCOPE OF WORK**

Development of a reliable high-  
throughput, high-yield, thin film  
deposition scheme

## **RATIONALE FOR DECISION**

Fifty percent cost sharing

## **DISPOSITION**

Recommended